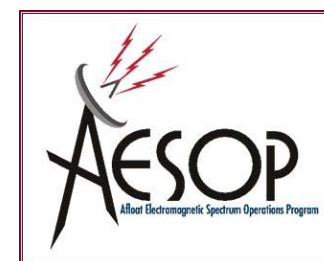


SA2 “101”

Joint USN/USMC Spectrum Conference

Gerry Fitzgerald

04 MAR 2010



Organization: G036
Project: 0710V250-A1

DISTRIBUTION A: Approved for public release
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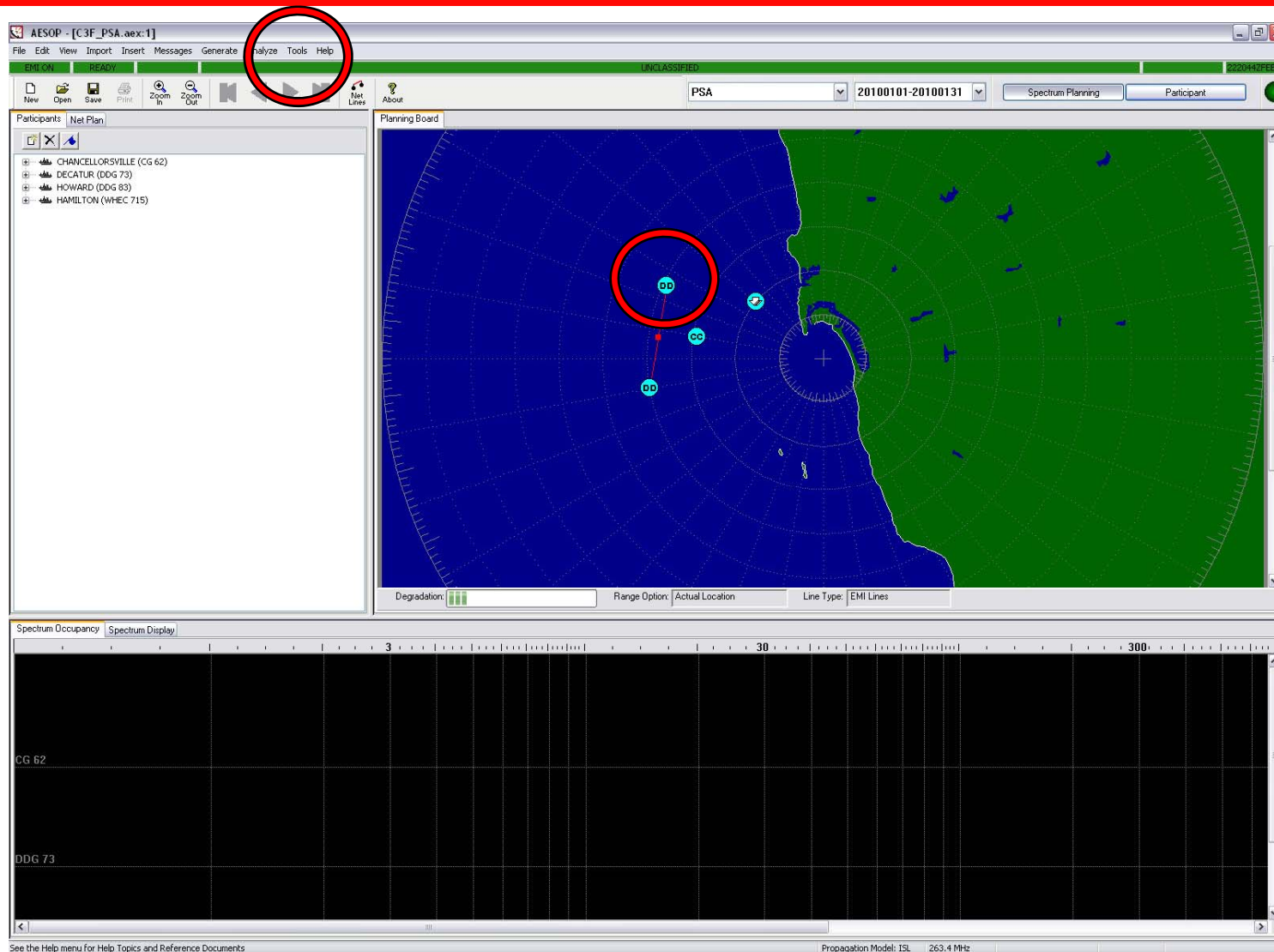
What's This All About?

- **Introduce SA2**
- **Explain where SA2 is and what it does**
- **Introduce the team**
- **Discuss current plans**
- **Request your feedback**

What is SA2?

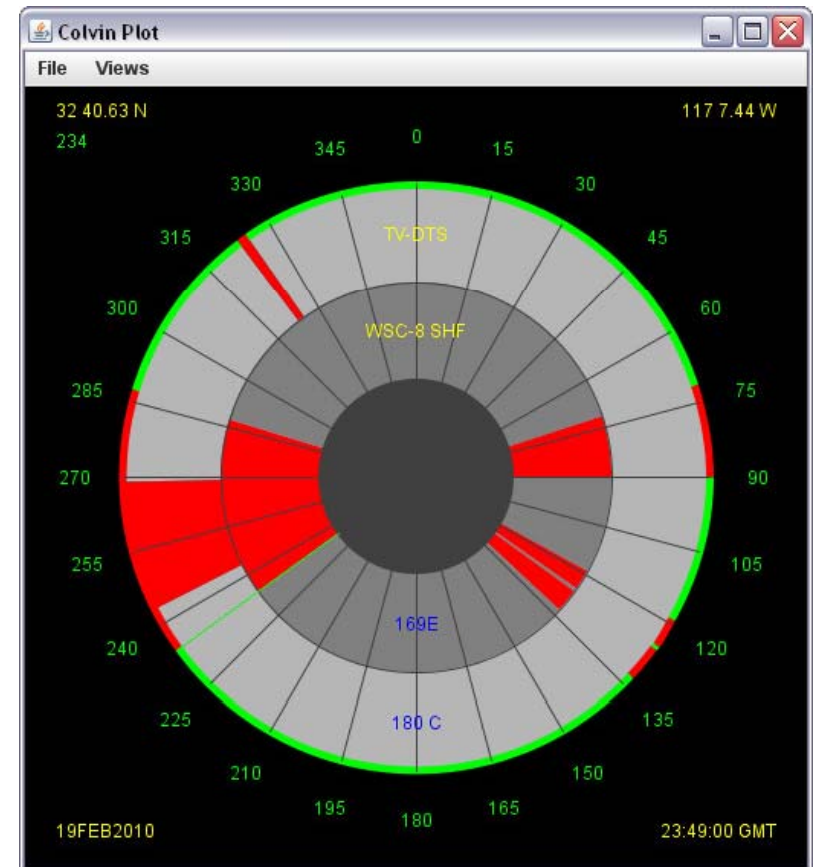
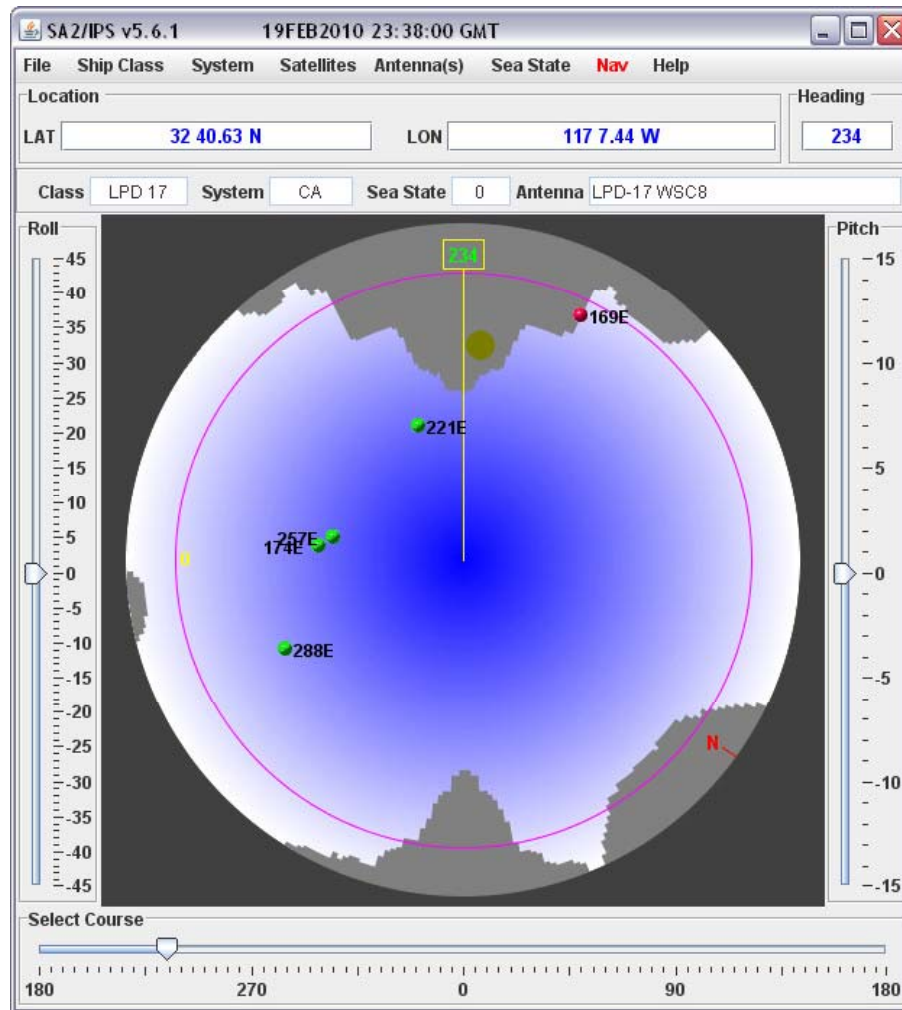
- The SATCOM Availability Analyst (SA2) is a software application originally built for SPAWAR PMW 176, now included in AESOP, and also fielded by USCG
- SA2 allows SATCOM operators to determine, for any location, heading, and sea state, what SATCOM systems are available given superstructure blockage and elevation angle constraints
- SA2 features a library of handlers allowing real-time connection to Navy, Coast Guard and commercial navigation and attitude data sources
- It provides real-time Situation Awareness to shipboard SATCOM *operators*, in an extremely simple display which has already seen months of at-sea testing and refinement, including in combat
- It also allows SATCOM *planners* to develop global statistics for the availability of Line of Sight (LOS) for specific constellations and topside designs, taking ship motion into account. It supports mission planners in optimizing satellite cutovers

Where is it in AESOP 2.1?

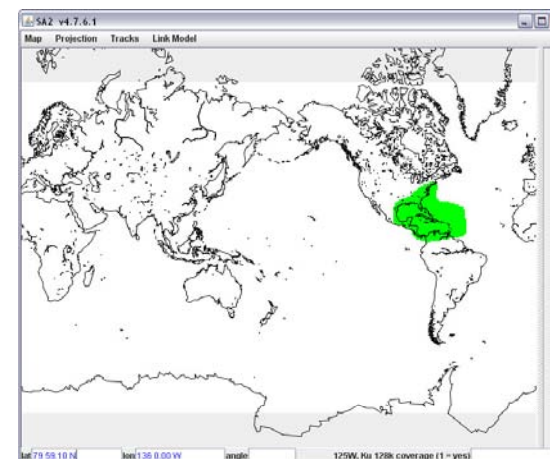
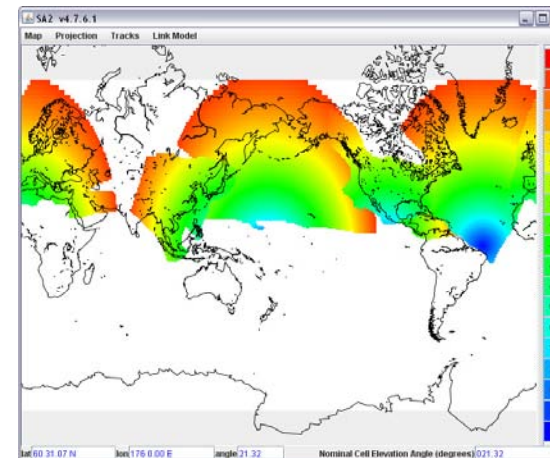
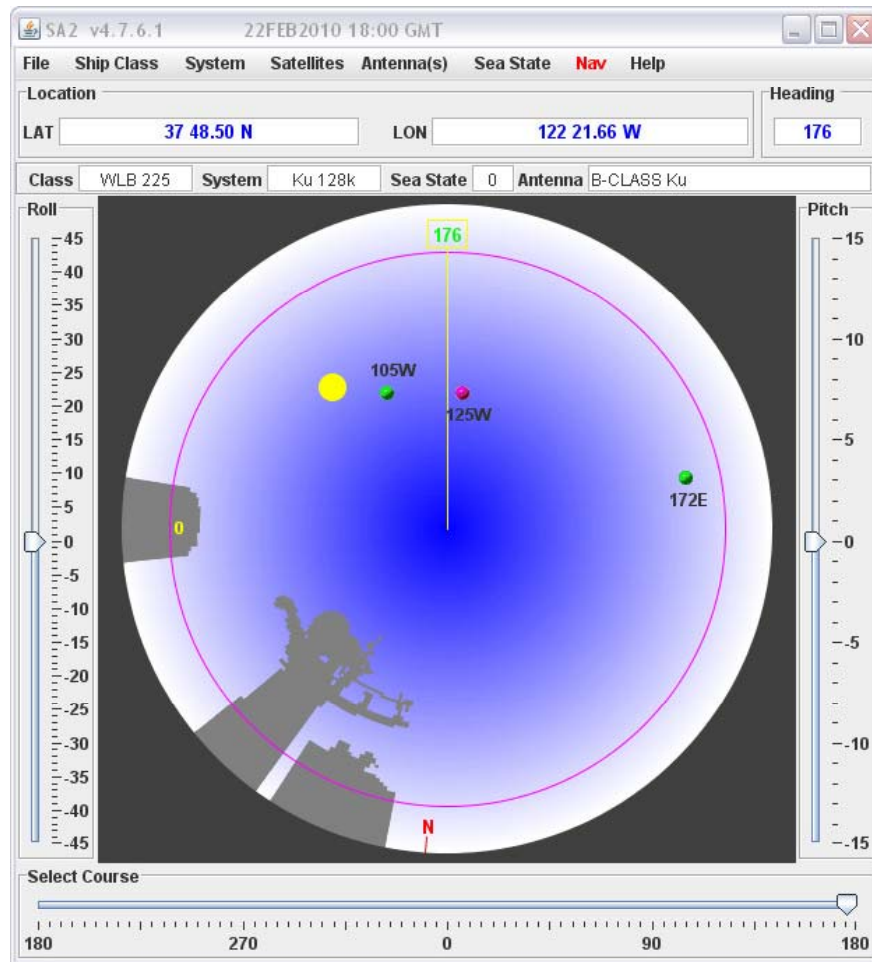


1. Under "Tools" menu
2. Right-click on ship icon

What does it look like?



What *will* it look like?



Current Plans, AESOP Version

- **Fold in latest USCG advances**
 - **Location “Bookmarks”**
 - **Spot Beam handlers**
 - **User and Administrator Guide**
- **Share waypoint files or Scenario phase locations with AESOP**
- **Implement automatic cutover-plan generator**
- **CBSP terminal blockage files and constellation definition**
- **Add Seawolf, Virginia-class and SSGN sail plans**
- **Add LCS-1, LCS-2**
- **... and interested in your ideas!**

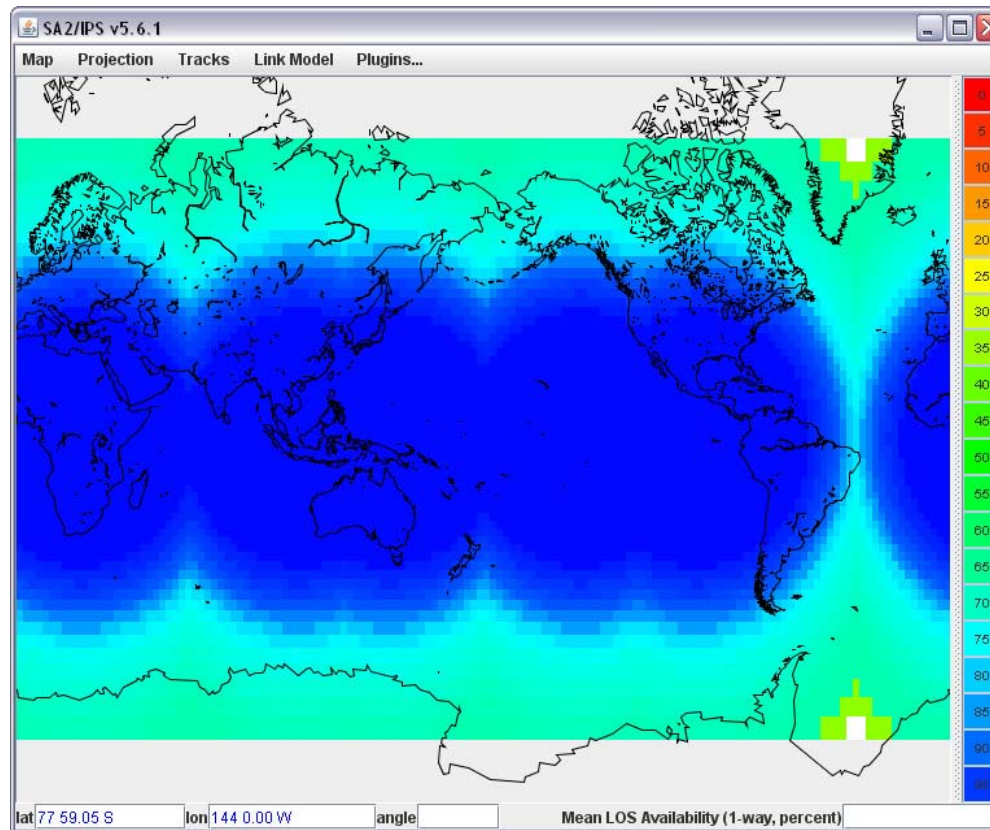
Who we are

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Backup

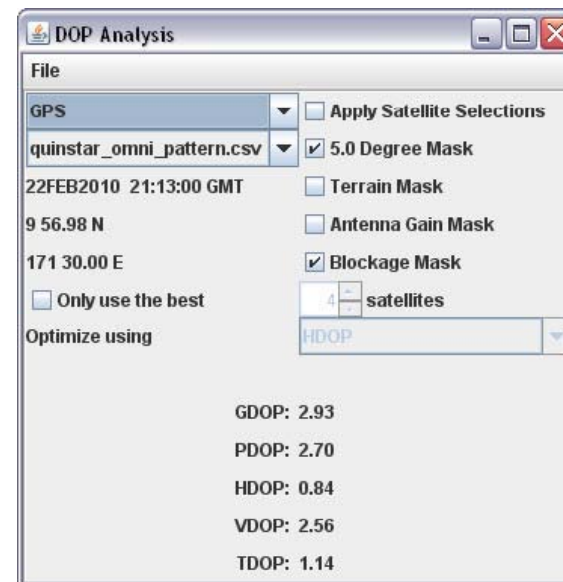
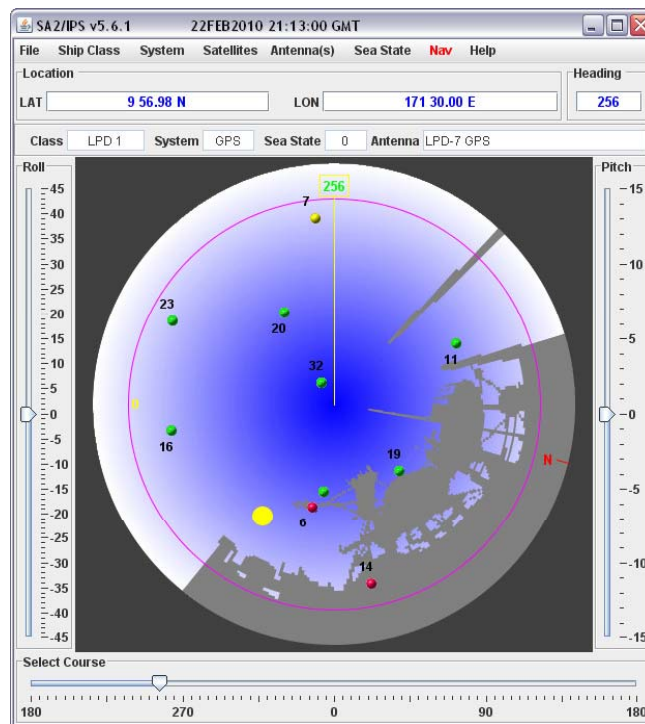
Averaged LOS Availability (ALA)

- Percentage of usable (unblocked) headings, at a given location
- May be mapped
- May be averaged over the entire footprint of a constellation

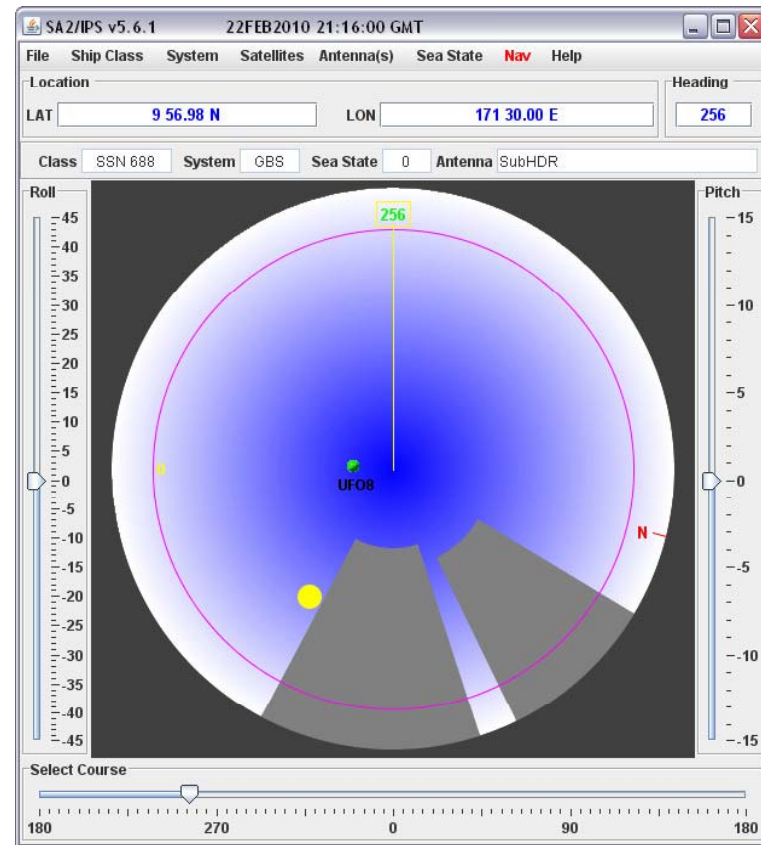
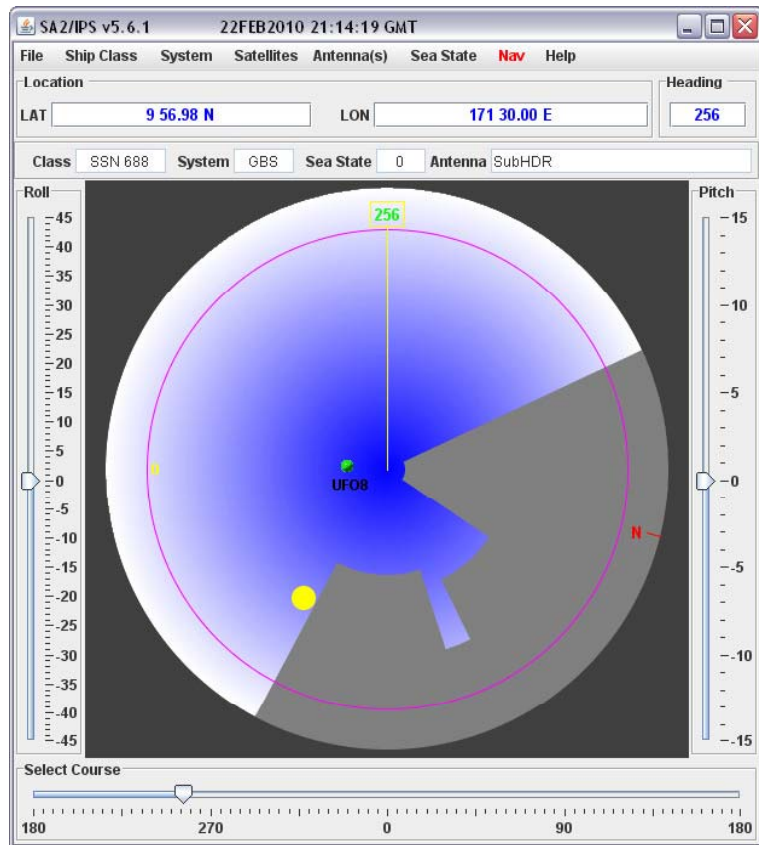


GPS Tools

- Can display GPS Satellites in view, in real time
- Compute DOP metrics, reflecting WRN-6 and newer receiver models



Other Examples



Blockage File Acquisition

- Prefer to import Antenna Control Unit files
- Can do quick, approximate optical surveys when ACU files not generated (INMARSAT, TV...)

